

9 December 2024

## CS205 Final Project User Manual

Tue Nhi Cao, Meiers Dixon, Chris Garcia, & Molly Yoder

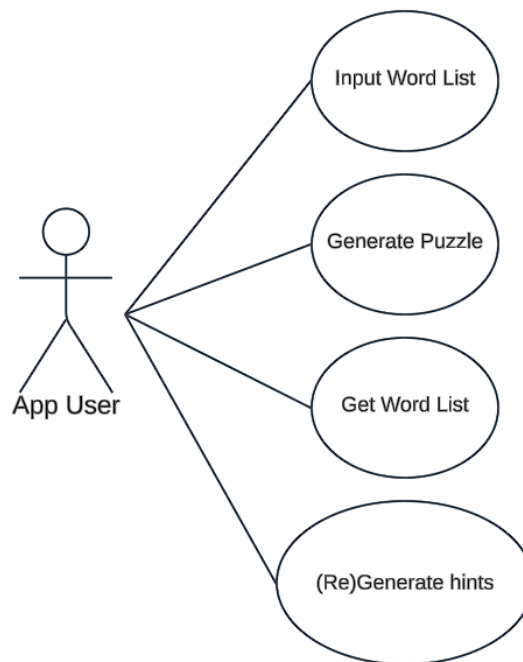
### General Statement

With this program, we are providing solutions to crossword-related problems for both educators and crossword enthusiasts. This is the chief motivation for our two modes, which are educational- and game-oriented. For example, teachers should be able to create a crossword pertinent to a vocabulary list they would like to give to their students. Our program gives a simple interface to enter desired words that are dynamically and automatically used to create a crossword for them. For the average player, we wanted a game mode that would be able to create different crosswords repeatedly, simply, and reliably.

### Background

Essentially, the motivation for this project was to create a simple and effective way to create crosswords for a handful of use cases. We all had a great level of interest in learning how to generate crosswords and make it easy for anyone who wishes to create their own. Two key domains became prevalent during our design and implementation phases: Educational Technology and Casual Gaming. On the educational side, we considered the fact that some teachers wish to create their own custom crosswords for use in the classroom and beyond. Many are restricted by those given as part of the regular curriculum, but this need not be the case. They should be able to effortlessly and dependably be able to customize these lists with their own input without the hassle of creating them from scratch. On the gaming side, some users may want to repeatedly generate random crosswords. Many programs do not allow their users to quickly

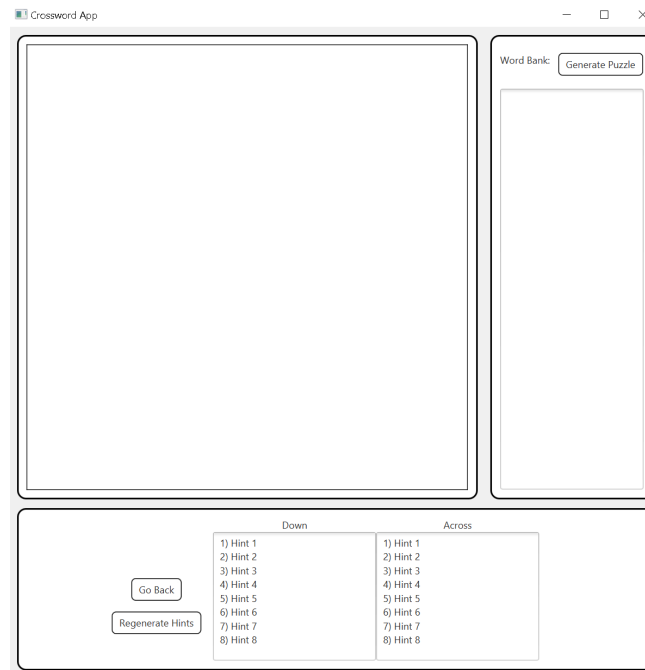
play a new game; some popular hubs only allow one game to be played per day. However, this is done efficiently in our game mode section.



### Instructions

When entering the program, you will be greeted with a main menu screen. From there, two main sections will be readily available. The first and primary section is titled “Epic Education.” Once clicking this button, the user will be taken to a new scene that presents multiple options. Starting at the top left, there is an area where the crossword will be displayed. To the right is a vertical container with the heading “Word Bank” followed by a “Generate Puzzle” button. Below this heading and button, users can enter the words they wish to be included in the crossword. Once a word is written, press the “Enter” key on the keyboard to start a new line to write the next word. When all of the words are placed, the user can press the “Generate Puzzle” button and see their crossword appear on the left side. In the current implementation, Hints are also generated below, which replace the placeholders present in the beginning. If the user wishes to create new hints, the “Regenerate Hints” button is available with

ease. To return to the main menu, the user presses the “Go Back” button placed above the “Generate Hints” button.



Now we can begin our discussion of the “Insane Game” section of the program. The layout is very familiar while reimagining the main functionality of the “Epic Education” section, namely using a wider area for the crossword. In the game version, a crossword is automatically generated using a predetermined database of words. Each word has hints associated with them, and so appear automatically upon pressing the button “Generate Crossword.” Currently, this game version is still in development. The vision is to be able to write in the empty text boxes that are available upon crossword generation. From there, the user would be able to press the “Check Crossword” button to see their results. Boxes with the correct letter are highlighted green; Otherwise, they do not change in appearance.

Crossword App

Go Back

Generate Crossword

Check Crossword

Down

1) Hint 1  
2) Hint 2  
3) Hint 3  
4) Hint 4  
5) Hint 5  
6) Hint 6  
7) Hint 7  
8) Hint 8

Across

1) Hint 1  
2) Hint 2  
3) Hint 3  
4) Hint 4  
5) Hint 5  
6) Hint 6  
7) Hint 7  
8) Hint 8